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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,116	10/24/2003	Mark S. Andreaco	25178.01	1623
22465	7590	11/22/2004	EXAMINER	
PITTS AND BRITTIAN P C			AHMED, SHAMIM	
P O BOX 51295			ART UNIT	PAPER NUMBER
KNOXVILLE, TN 37950-1295			1765	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/693,116	ANDREACO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shamim Ahmed	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/9/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Two of the references in the information disclosure statement filed 12/09/03 are not initialed and have not been considered as to the merit because they do not to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because both the reference publication listed in the IDS do not provide any date of the publication.

Applicant is advised to provide the publication date of the non-initialed publication cited in the IDS.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3,7-10,12,14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedner et al (6,245,184) in view of Uchida et al (5,091,650).

Riedner et al teach a process of forming a high-resolution detector by cutting a first number of bars of scintillator with desired dimension; arranging the bars (110) in an array and laminating the bars together with adhesive and introducing a reflector material in between the two scintillator bars (col.3, lines 5-16).

Riedner et al also teach that cutting a second group of bars (118) from the formed assembly, wherein the cut is perpendicular to the bars and a reflector material (114) is disposed in between the bars (col.3, lines 16-46 and figure 5).

Riedner et al teach that laminating second group of bars together having reflector material between the adjoining scintillator bars (col.3, lines 48-63 and figure 6).

Riedner et al fail to explicitly teach the introduction of a polishing step after the cutting step.

However, in a method of manufacturing optical device, Wittry teaches after cleaving a crystal, it is important that the surface be damage free and can be accomplished by etching or polishing or mechanical polishing (col.4, lines 32-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the claimed invention to combine Wittry's teaching into Riedner et al's process for providing a damage free crystal bars for efficiently laminating the bars together as taught by Wittry.

5. Claims 4-6 and 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedner et al (6,245,184) in view of Uchida et al (5,091,650) as applied to claims 1-3,7-10,12,14-16 above and further in view of Persyk et al (4,879,465).

Modified Riedner et al discussed above in the paragraph 4 but fail to teach forming the detector by bonding together scintillator crystals with different decay times in an alternating pattern.

However, Persyk et al teach forming a high-resolution detector by bonding two different scintillator material having distinguishable decay time in an alternate fashion (col.2, lines 11-18 and col.2, lines 65-col.3, line 3 and abstract) and such arrangement minimizing the edge packing problem.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of claimed invention to combine Persyk et al's teaching into modified Riedner et al's process for advantageously forming a detector with reduced edge packing problem as taught by Persyk et al.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,749,761. Although the conflicting claims are not identical, they are not patentably distinct from each other because polishing step and forming a thin reflective optical film of instant application broadly reads on the etching step and the polyester film as a reflective material.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uchida et al (5,091,650) disclose a process of making detector in which scintillator array is provided with a reflector material layer disposed in between neighboring scintillator elements (col.2, lines 23-35); Ryuo et al (5,061,855) teach BGO crystal scintillator was prepared with reflecting layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed  
Examiner  
Art Unit 1765

SA  
November 18, 2004